

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel E. Ovanezian on 6/19/2008.

(1) Replace claim 1 by the following:

A method of transmitting **data using pseudo-noise codes**, comprising:  
transmitting a first pseudo-noise code from a transmitter; and  
transmitting a second pseudo-noise code from the transmitter, wherein the second pseudo-noise code is a time-reversed version of the first pseudo-noise code and a relationship between the first and second codes in each transmission **represents** two bits of data for each one transmission by forming the first pseudo-noise code and the second pseudo-noise code into a pair.

(2) Replace claim 8 by the following:

--A method of receiving communications codes, comprising:  
receiving a transmission including first and second pseudo-noise codes formed into a pair; **wherein the first pseudo-noise codes is a time-reversed version of the second pseudo-noise code;**

comparing the first **received** pseudo-noise code to the second **received** pseudo-noise code;

detecting a match between the first and second pseudo-noise codes based upon a match count peak; and

sending an enable signal to a memory to cause the memory to store at least one of the first and second codes, the enable signal based upon a match detection result.---

***Allowable Subject Matter***

2. Claims 1-12, 14-19 are allowed.
3. The following is an examiner's statement of reasons for allowance:  
(1) Regarding claims 1-7:

The present invention describes a method of transmitting data using pseudo-noise codes, comprising transmitting a first pseudo-noise code from a transmitter; and transmitting a second pseudo-noise code from the transmitter, wherein the second pseudo-noise code is a time-reversed version of the first pseudo-noise code and a relationship between the first and second codes in each transmission represents two bits of data for each one transmission by forming the first pseudo-noise code and the second pseudo-noise code into a pair. The closest prior art, Mayrargue (US 2004/0234005 A1) and Mori et al. (US 5,105,436) discloses a similar system but fails to disclose wherein the second pseudo-noise code is a time-inversed version of the first pseudo-noise code and a relationship between the first and second codes in each transmission represents two bits of data for each transmission by forming the first

pseudo-noise code and the second pseudo-noise code into a pair. This distinct feature has been added to the independent claim 1, thus rendering claims 1-7 allowable.

(2) Regarding claim 8-12:

The present invention describes a method of receiving communications codes, comprising receiving a transmission including first and second pseudo-noise codes formed into a pair; wherein the first pseudo-noise codes is a time-reversed version of the second pseudo-noise code; comparing the first received pseudo-noise code to the second received pseudo-noise code; detecting a match between the first and second pseudo-noise codes based upon a match count peak; and sending an enable signal to a memory to cause the memory to store at least one of the first and second codes, the enable signal based upon a match detection result. The closest prior art Sugita et al. (US 5,862,172), Mayrargue (US 2004/0234005 A1), and Poon et al. (US 2003/0128747 A1) discloses a similar method but fail to discloses receiving a transmission including first and second pseudo-noise codes formed into a pair; wherein the first pseudo-noise codes is a time-reversed version of the second pseudo-noise code and comparing the first received pseudo-noise code to the second received pseudo-noise code to detect a match. This distinct feature has been added to the independent claim 8, thus rendering claims 8-12 allowable.

(3) Regarding claims 14-19:

The present invention describes a device comprising a receiver to receive a pair of pseudo-noise codes; a first register to store a first pseudo-noise code; a second register to store a second pseudo-noise code in time-reversed order; a comparison

circuit to compare contents of the first register to contents of the second register and output a match count result; and a memory electrically coupled to the comparison circuit to receive an enable signal from the comparison circuit, the enable signal being based upon a match count result. The closest prior art, Sugita et al. (US 5,862,172) and Kurihara et al. (US 4,943,975) discloses a similar device but fail to disclose a first register to store a first pseudo-noise code; a second register to store a second pseudo-noise code in time-reversed order; a comparison circuit to compare contents of the first register to contents of the second register and output a match count result; and a memory electrically coupled to the comparison circuit to receive an enable signal from the comparison circuit, the enable signal being based upon a match count result. This distinct feature of independent claim 14 rendering the allowance of claims 14-19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SIU M. LEE whose telephone number is (571)270-1083. The examiner can normally be reached on Mon-Fri, 7:30-4:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Siu M Lee/  
Examiner, Art Unit 2611  
6/16/2008

/Chieh M. Fan/

Supervisory Patent Examiner, Art Unit 2611